

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A data receiver for receiving user data and reference data coming from a transmitter via at least a channel, the data receiver comprising:
means for unscrambling data,
means for despreading unscrambled data,
means for analyzing a characteristic of the channel,
for each path in a rake finger of the data receiver, means for respectively evaluating the contribution of interferences of data caused by the channel, and
~~subtractor~~ subtractor means for cancelling the contribution of interference in the user data for the rake finger, using the respectively evaluated interferences in each path of the rake finger, said ~~subtractor~~ subtractor means being placed before said unscrambling means.
2. (Original) A data receiver as claimed in claim 1, characterized in that the data are in compliance with the UMTS standard.
3. (Original) A data receiver as claimed in claim 2, characterized in that the reference data are provided by the CPICH channel.
4. (Currently Amended) A method for receiving user data and reference data coming from a transmitter via at least a channel which causes interference in the user data, the method comprising the following steps:

analyzing the characteristic of the channel by using the reference data,
for each path in a rake finger, respectively determining an evaluation of the
interferences of data provided in each path by the channel,
~~subtracting~~ subtracting the evaluation of interference from the received user
data in the rake finger, and
unscrambling the user data received via the rake finger.

5. (Currently Amended) The method of claim 4,
further including adding a determined evaluation of each path in the rake
finger together to determine interference in the rake finger,
wherein ~~subtracting~~ subtracting the evaluation of interference includes
~~subtracting~~ subtracting the determined interference in the rake finger from user
data processed via the rake finger and providing an output representing
interference-corrected user data for unscrambling, and
wherein unscrambling includes unscrambling the interference-corrected user
data output to provide a rake finger output from the unscrambling step.

6. (Currently Amended) The method of claim 4, wherein ~~subtracting~~
subtracting includes ~~subtracting~~ subtracting an interference evaluation within a rake
finger.

7. (Currently Amended) The method of claim 4,
wherein respectively determining an evaluation of the interferences includes
separately determining an interference evaluation for each of a plurality of paths
within the rake finger,
further including adding the separately-determined interference evaluations,
and

wherein ~~subtracting~~ subtracting includes ~~subtracting~~ subtracting the added interference evaluations from the received user data.

8. (Currently Amended) The data receiver of claim 1, wherein the means for respectively evaluating the contribution of interferences includes

an interference estimator for each path in the rake finger, each interference estimator including a plurality of correlators and a correlator adder to add the output of each correlator, and

an interference adder to add the output of the interference estimator for each path; and

the ~~subtractor~~ subtractor means is located in the rake finger, coupled to receive an output from the interference adder, adapted to ~~subtract~~ subtract the output of the interference adder from the user data to provide a ~~subtracted~~ subtracted user data output, and coupled to provide the ~~subtracted~~ subtracted user data output to the means for unscrambling data.

9. (Currently Amended) The data receiver of claim 1, wherein the ~~subtractor~~ subtractor means is located in the rake finger.

10. (Currently Amended) The data receiver of claim 1, wherein the means for respectively evaluating includes a plurality of interference estimators respectively allocated to a path in the rake, and an adder to add an output of the interference estimators, and

the ~~subtractor~~ subtractor means is located after the adder and adapted to receive and use an output from the adder to ~~subtract~~ subtract interference from user data processed via the rake finger.

11. (Currently Amended) A rake receiver for processing a received data signal, the rake receiver comprising:

a plurality of rake fingers, at least one of the rake fingers including
for each of a plurality of paths in the rake finger, an interference estimator to determine the interference in the path,

an adder to add the determined path interferences from the interference estimators,

a ~~subtractor~~ subtractor to ~~subtract~~ subtract the added interferences from the received data signal to provide a corrected output corresponding to the received data signal with the interferences ~~subtracted~~ subtracted therefrom, and

an unscrambler to receive and unscramble the corrected output to provide an unscrambled output;

a despreader to receive and despread the unscrambled output to provide a despread output; and

a combiner to combine the despread output with outputs from others of the plurality of rake fingers.

12. (Previously Presented) The rake receiver of claim 11, each of the interference estimators includes

a plurality of correlators, each correlator adapted to generate an interference estimate for all $j-1$ paths in the received data signal, where j is not equal to the path of the finger in which the correlator is located, and

an adder to add the output of the plurality of correlators, and to provide the output as the determined path interference for the interference estimator.

13. (Previously Presented) The rake receiver of claim 11,
further including a conjugate device to evaluate the conjugate of a scrambling
code for the data signal, and
wherein the unscramble uses the evaluated conjugate to unscramble the
corrected output.

14. (Previously Presented) The rake receiver of claim 11, wherein each
interference estimator includes a plurality of correlators, the number of correlators
corresponding to the number of paths for the signal, the combined output of the
correlators for a particular interference estimator providing the determined path
interference for the particular interference estimator, at least one of the correlators
including

a channel multiplier to multiply channel coefficients by a value of a
channel symbol for the received data signal,

scrambling multipliers $M(-N)$ and $M(+N)$ to multiply an output from the
multiplier with a scrambling code of a parasitic link delayed in accordance with a
delay of the link,

operators $\rho(-N)$ to $\rho(+N)$ to operate on the output of the scrambling
multipliers, where N corresponds to a number of interference coefficients ρ , each
coefficient being generated by a cross-correlation of transmitting and receiving filters
used for respectively transmitting and receiving the data signal, and

an adder to sum the output of the scrambling multipliers as applied to
the operators to provide the output of the correlator.